

WHAT IS CLAIMED IS:

1. A ventilator system comprising:
a mask to be placed over a wearer's face, said mask having
a shell;
a cushion provided to the shell to sealingly connect the mask to the
wearer's face and thereby form a chamber between the shell and the wearer's
face; and
an inlet port in said shell to receive a flow of breathable gas; and
an air flow generator, said air flow generator being mounted on said mask and
being capable of creating a pressure of about 2-40cm H₂O in said chamber.
2. The system of claim 1, wherein the mask is structured to cover the
wearer's nasal and oral region.
3. The system of any one of claims 1 or 2, wherein the mask is
constructed to avoid obstruction of the wearer's vision or field of view.
4. The system of any one of claims 1-3, wherein said mask is absent a
dust filter.
5. The system of any one of claims 1-4, wherein the mask is designed to
have said inlet port located in front of the wearer's oral region.
6. The system of any one of claims 1-5, wherein said air flow generator
has an air intake opening and an air outlet, said air outlet being positioned in
proximity to said air inlet port of the mask.
7. The system of claim 6, wherein a perforated screen positioned between
said air outlet and said inlet port.

8. The system of any one of claims 1-7, wherein said cushion comprises a silicone elastomer.

9. The system of any one of claims 1-8, wherein said air flow generator comprises a housing including an impeller and a motor to drive the impeller, said housing forming a contiguous surface with the shell.

10. The system of claim 9, the ventilator system further comprising a power cord and a power source, said power cord connecting said power source to said motor.

11. The system of claim 10, wherein said power source is a battery pack.

12. The system of claim 11, wherein said battery pack comprises at least one fastener to mount the battery pack to said wearer's body.

13. The system of any one of claims 1-9, further comprising a self-contained power source.

14. A ventilator system comprising:

a mask having

a shell;

a cushion provided to the shell to sealingly connect the mask to a wearer's face and thereby form a chamber between said shell and said wearer's face;

an inlet port in said shell to receive a flow of breathable gas;

an air flow generator; and

an air delivery tube not exceeding 1.5 meters in length, said air delivery tube being functionally connected to said inlet port and said air flow generator to create a

pressure of about 2-40cm H₂O in said chamber by delivery of breathable gas from said air flow generator to said inlet port.

15. The system of claim 14, wherein said air delivery tube does not exceed 1 meter in length.

16. The system of any one of claims 14 or 15, wherein the air delivery tube is low in profile and is kink resistant.

17. The system of any one of claims 14-16, wherein the mask is structured to cover the wearer's nasal and oral region.

18. The system of any one of claims 14-17, wherein the mask is constructed to avoid obstruction of the wearer's vision.

19. The system of any one of claims 14-18, wherein said mask is absent a dust filter.

20. The system of any one of claims 14-19, wherein said air flow generator is absent a dust filter.

21. The system of any one of claims 14-20, wherein the mask is designed to have said inlet port located in proximity to a wearer's oral region.

22. The system of any one of claims 14-21, wherein said cushion comprises a silicone elastomer.

23. The system of any one of claims 14-21, wherein said air flow generator comprises a housing with an impeller and a motor for driving the impeller.

24. The system of claim 23, wherein said ventilator system further comprises a power cord and a power source, said power cord connecting said power source to said motor.

25. The system of claim 24, wherein said power source is a battery pack.

26. The system of any one of claims 14-25, wherein said air flow generator comprises one or more straps or clips for mounting the air flow generator to the wearer's body.

27. The system of any one of claims 1-26, wherein said air flow generator is selectively detachable from the shell.

28. The system of claim 27, wherein the air flow generator and shell are coupled with a quick release clip.

29. The system of any one of claims 1-28, further comprising at least one sensor provided to the mask.

30. The system of claim 29, wherein the sensor is structured to provide a signal indicative of the fit of the mask.

31. The system of claim 29 or 30, wherein the sensor is structured to provide a signal indicative of leak on the basis of which the flow generator is adapted to be controlled.